

Erosion Resistant Compressor Blade Repair Technologies, Phase I

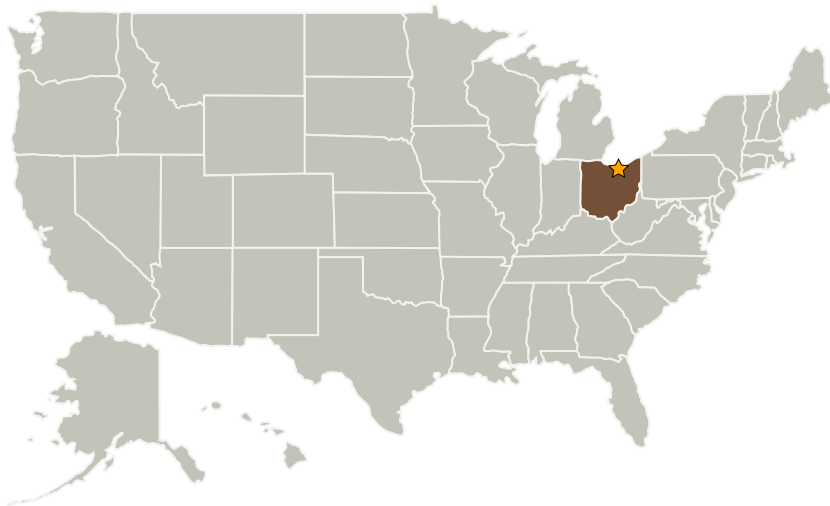
Completed Technology Project (2007 - 2007)



Project Introduction

This Phase I SBIR program will demonstrate the use of wear resistant high strength nanocomposites in the turbine engine repair and refurbishment process. The metallic nanocomposite will be applied using laser additive remanufacturing to worn turbine blades. This would provide greatly increased erosion resistance for rotorcraft turbine engines, extending their life and reducing fuel consumption by 15-20% over the life of the engine. Powdermet will develop composite feedstocks optimized for laser additive manufacturing, and is teamed with Flight Support International, and FAA certified repair shop certified for T64 engine repairs.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Glenn Research Center(GRC)	Lead Organization	NASA Center	Cleveland, Ohio
Powdermet, Inc.	Supporting Organization	Industry	Euclid, Ohio

Primary U.S. Work Locations

Ohio



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Glenn Research Center (GRC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX01 Propulsion Systems
 - └ TX01.3 Aero Propulsion
 - └ TX01.3.1 Integrated Systems and Ancillary Technologies